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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/489,324      | 01/21/2000  | Kristin Butcher      | 00P7423US           | 5692             |

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EXAMINER

WOO, ISAAC M

ART UNIT

PAPER NUMBER

2172

DATE MAILED: 03/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/489,324

Applicant(s)

BUTCHER, KRISTIN

Examiner

Isaac M Woo

Art Unit

2153

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 January 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-32 are rejected under 35 U.S.C. 101 because: the claimed invention is directed to non-statutory subject matter, which are mathematical algorithm.

Claims 1, 4, 18, 23, 28, 29, 30, and 32, to mathematical algorithm without any limitation to a practical application have been held to be non-statutory subject matter. Le Roy v. Tatham, 55 U.S. 156, 175 (1852) and Mackay Radio & Telegraph Co. V. Radio Corp. Of America, 306 U.S. 86, 94 (1939).

Claims 1, 4, 18, 23, 28, 29, 30, and 32 are explicitly drawn to merely manipulating of numbers and too abstract idea and a pure mathematical algorithm without any limitation to a practical application. The claimed methodical algorithm is not applied as in the claim held statutory in Diamond v. Diehr, 450 U.S. 175, 109 USPQ 1 (1981). Therefore, the claims are drawn to non-statutory subject matters.

Claims 2-3, 5-17, 19-22 and 24-27 are rejected as being dependent upon rejected bases claims.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1, 3, 18, 21-22, 28 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Ansell et al (U.S. Patent No. 6,151,631, hereinafter, "Ansell").

With respect to claims 1, 18, 28 and 30, Ansell discloses the method for representing a given numbers with a plurality of entries, the method comprising:

determining whether one or more portions of the given range are representable as one or more entries that utilize wildcards, see (col. 10, lines 552-54 and col. 11, lines 1-10; Note: a given IP range is already represented with wildcard, which implies that determination step was prior to representation step with wildcard. Thus, it is inherent.);

representing the one or more portions of the given range with one or more entries having one or more wildcards when such one or more portion are representable as one or more entries that utilize wildcards, see (col. 11, lines 5-10); and

representing all numbers of a remaining one or more portions of the given range that are not representable as one or more entries that utilize wildcards as entries that do not use utilize wildcards, see (col. 11, lines 1-10; e. g., for IP address, 127.56.212.\*, 127.56.212 is represented without wildcard),

wherein the entries are optimized such that a minimum number of entries are used to represent the given range, see (col. 11, lines 8-10; i.e., 127.56.212.\*, 127.56.213.\* and 127.56.214.\*, are optimized entries).

With respect to claim 3 and 21-22 Ansell discloses that each number within the given represents a router address (IP), see (col.11, lines 1-10).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 2, 19-20 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ansell et al (U.S. Patent No. 6,151,631) in view of Comito et al (U.S. Patent No. 6,195,658, hereinafter, "Comito").

With respect to claims 2, 19-20 and 31, although Ansell discloses the number within given range, he fails to explicitly disclose that the number within the given range represents a phone number. However, Comito teaches that the number within the given range represents a phone number, see (col. 9, lines 12-15). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include the system of wildcard representation of Comito for phone number into the system of Ansell. One of ordinary skill in the art would have been motivated to combine Ansell with the teaching of Comito. In order to save data storage for huge data of tens of millions of telephone numbers, the data representation with wildcard (the most common way to compact data to reduce data size) is very efficient method. Especially, for the given range of any types of numbers, it will save huge amount of database storage.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

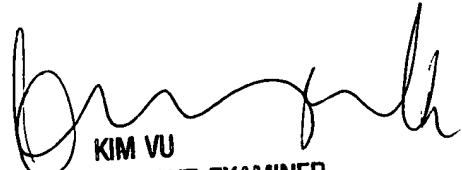
Stone (U.S. Patent No. 5,546,390) discloses optimizing data.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac M Woo whose telephone number is (703) 305-0081. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on (703)305-4393. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-5397 for regular communications and (703) 308-6606 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

IMW  
February 28, 2002

  
KIM VU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100